

REMARKS

In the Office Action, the Examiner: (1) rejected claims 1, 2, 14-17 and 22-26 under 35 U.S.C. § 112, ¶ 2 as being indefinite; (2) rejected claims 1-2, 14-17, 23-26 and 31 under 35 U.S.C. § 103(a) as being unpatentable over Cozine (U.S. Patent No. 3,364,004) in view of Singer *et al.* (U.S. Patent No. 6,679,085); and (3) objected to claim 22. Applicants respond as follows:

1. Response to Rejection Under 35 U.S.C. § 112, ¶ 2

The Examiner rejected claims 1, 2, 14-17 and 22-26 under 35 U.S.C. § 112, ¶ 2 as being indefinite, taking the position that the phrase “substantially similar” is relative and therefore indefinite. Applicants respectfully disagree with the Examiner’s position but in the interest of furthering prosecution have deleted this phrase from the claims. In view of this amendment, Applicants submit that the rejection under section 112 is moot.

2. Response to Rejection Under 35 U.S.C. § 103(a)

The Examiner rejected claims 1-2, 14-17, 23-26 and 31 under 35 U.S.C. § 103(a) as being unpatentable over Cozine and Singer. For the reasons provided below, Applicants request that the Examiner reconsider the rejection.

The Examiner inferred that Cozine teaches a mandrel for producing glass tubes, the mandrel having rear and front ends that have decreasing diameter and comprising a blowpipe, wherein the blowpipe comprises at least one self supporting tube, the self-supporting tube comprising an outer wall and inner self-supporting structure, such as three circumferentially placed thrusts. (Office Action at page 5.) He then acknowledged that he interpreted Cozine’s tube as a jacket. (*Id.*)

Applicants respectfully request that the Examiner reconsider his interpretation of Cozine’s tube. Cozine’s tube is located inside of the mandrel and has no direct contact with the molten glass when the mandrel is in use. Moreover, in Cozine the surface of the mandrel is formed by a refractory member, which is a ceramic material. See Cozine, Figures 2 and 3, reference sign (21) and col. 4, lines 44-45, 52-53, and 59. By contrast

and as figures 2 to 4 of the present application show, in Applicant's claimed mandrel the outer wall of the self-supporting metal jacket forms the outer wall of the surface of the mandrel. By the amendments above, this feature has been made explicit in claims 1 and 31. See figures 2 to 4 and page 5, lines 10-13 for support for this feature. (Applicants have also made other minor amendments to claims 1 and 31.)

Similarly, the Examiner has not identified any portion of Singer that discloses the aforementioned feature that is missing from Cozine. Therefore, because neither Singer nor Cozine, alone or in combination disclose all of the features of claims 1 and 31 as amended, claims 1 and 31 are not obvious in view of those references.

The other rejected claims all depend on either claim 1 or claim 31. Therefore, for at least the reasons that claims 1 and 31 are patentable over the art of record, the claims that depend on them are patentable over it as well.

3. Response to Objection to Claim 22

The Examiner noted that claim 22 was directed to allowable subject matter. However, he objected to its being dependent upon a rejected base claim. Because for at least the reasons provided above, the base claim is allowable, Applicants request that this objection be withdrawn.

4. New claim 33

Applicants have added new claim 33, which recites certain features that are in pending claim 1 as amended, as well as the feature that the diameter of the mandrel is conical or continuously decreasing. Support for this new claim appears in claim 1, as well as in figure 4 and page 7, lines 5 to 7 of the specification.

Because claim 33 has the features described above that render claim 1 patentable over the cited art, claim 33 is patentable over it as well. Furthermore, even if the Examiner maintains the rejection over claim 1, claim 33 is nonetheless patentable over the cited art because in claim 33, Applicants have narrowed the group of features that may form the inner supporting structure, not including at least one thrust, and the Examiner has not identified where the art of record discloses any of the other structures

within group.

5. Conclusion

Based on the foregoing, Applicants request reconsideration and allowance of all claims.

Applicants believe that no fees are due at this time. However, if any fees are necessary, please charge Deposit Account No. 11-0171 for such sum. If the Examiner has any questions regarding the present application, the Examiner is cordially invited to contact Applicant's attorney at the telephone number provided below.

Respectfully submitted,

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